

Amendments to the Specification:

Please amend the specification as follows:

1. Please replace the third ~~full~~ paragraph on page 19, line 12, with the following paragraph noting that the phantom line font was not reproduced in the published application:

A-1

The second significant difference is that the system renders the configurations using different line fonts. The draftsman may select any line style including the industry standard line style for distinguishing alternative positions, which is known as a "phantom" line font and is a thin chain line that has double dashes (i.e., "_____"). The line font is stored in the AlternatePositionView object's data structure.

2. Please replace the last ~~paragraph~~ beginning on Page 19, line 27, and continuing on page 20 with the following paragraph:

A-2

The dimensions are parametric, and therefore, the system can update the dimensions in real time so that dimension lines that show what is being measured and dimension text that specifies the measured quantity are always correct. The system can automatically update the relevant dimensions if the design engineer modifies the model or if the draftsman modifies the underlying configuration thereby causing one of the alternative positions to move relative to another alternative position.

3. Please replace the third ~~full~~ paragraph beginning on page 21, line 16, with the following paragraph:

A-3

A dimension is generated for one or more dimensional entities, which may be in the same or different models. The pointer to the first dimensional entity 1432 belongs to the component referred to by the reference to a component 1408 in the first reference chain 1420. The pointer to the second dimensional entity 1434 belongs to the component referred to by the reference to a component 1414 in the second reference chain 1422. In this illustration, the dimension data is stored in a drawing sheet object because the dimensional entities are rendered in separate drawing view areas. However, if the entities are displayed in the same drawing view area, the dimension would be stored as part of a drawing view object.

4. Please replace the last paragraph beginning on Page 21, line 24, and continuing on page 22 with the following paragraph:

a4

As previously mentioned, each reference in a reference chain 1404-1414 contains a transformation. Taken together, the transformations stored in the reference chain produce a mapping from a component space to the coordinate space of the drawing view area or the coordinate space of the drawing sheet, depending on whether the dimensional entities are in the same or different drawing views. A reference to a component stores a transformation that accounts for the position of the component in the assembly model. A reference to an assembly model stores a transformation that maps the model into a drawing view ~~area~~ object. A reference to a drawing view ~~area~~ object stores a transformation that maps the drawing view area onto a drawing sheet.

5. Please replace the first paragraph beginning on page 22, line 3 with the following paragraph:

a5

The transformations that are stored in each reference in a reference chain 1404-1414 are all concatenated together. First, the transformation stored with the reference to the component is multiplied by the transformation stored with the reference to the assembly model, then the result is multiplied by the transformation stored with the reference to the drawing view object. The dimensional entities are then multiplied with the concatenated transformation. This operation has the affect of representing the dimensional entities within the same geometric space, thereby permitting the dimension value to be correctly calculated and the dimension lines and text to be correctly rendered.